NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOI ND ONE POINT BACK PRESSURE TEST FOF S WELL

Form C-122 CISF

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 02/19/2000	
Company: Yates Petroleum Corp		Connection: Agave Energy Company		
Pool: Penasco Draw		Formation: Atoka		Unit
Completion Date: 02/12/2000	Total Depth: 9300	Plug Back TD: 8895	Elevation: 3489	Farm or Lease Name: Rio Penasco JX Com
Csg. Size: 5.500 / Wt.: 17.000 / d: 4.892 / Set At: 9300		Perforations: From 8700 To 8887		Well No.: 2
Tbg. Size: 2.875 / Wt.: 6.500 / d: 2.441 / Set At: 8614		Perforations: From 8700 To 8887		Unit: I / Sec.: 35 / Twp.: 18S / Rge: 25E
Type Well: Single		Packer Set At: 8620		County: Eddy
Producing Thru: Tubing	Resv. Temp. °F: 145 @ 8700	Mean Temp. °F: 62	Baro. Press. - Pa: 13.2	State: New Mexico

L	H	Gg	%CO_2	%N_2	%H_2S	Prover	Meter Run	Taps
9300	411	0.610	0.570	0.274	0.000	0.000	2.000	Flange

	FLOW DATA						TUBING DATA		CASING DATA		
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI	0.000	x	0.000	0	0.0	0	960	0			0
1.	2.067	x	0.625	440	8.0	60	820	60			24
2	2.067	x	0.625	440	20.0	60	693	60			24
3.	2.067	x	0.625	440	32.0	60	567	60			24
4.	2.067	x	0.625	440	42.0	60	440	60			24
5		x									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	1.866	60.2	453.2	1.0000	1.280	1.040	150
2	1.866	95.2	453.2	1.0000	1.280	1.040	237
3	1.866	120.4	453.2	1.0000	1.280	1.040	299
4.	1.866	138.0	453.2	1.0000	1.280	1.040	343
5.							

NO	Pr	Temp °R	Tr	Z
1.	0.67	520	1.45	0.925
2	0.67	520	1.45	0.925
3	0.67	520	1.45	0.925
4	0.67	520	1.45	0.925
5				

Gas Liquid Hydrocarbon Ratio	0 Mcf/bbl.	
A.P.I. Gravity of Liquid Hydrocarbons	0.000 Deg.	
Specific Gravity Separator Gas	0.610	xxxxxxxxxx
Specific Gravity Flowing Fluid	xxxxxxxxxx	0.610
Critical Pressure	674 P.S.I.A.	674 P.S.I.A.
Critical Temperature	358 °R	358 °R

Pc 973.2 Pc^2 947.1

NO	Pt^2	Pw	Pw^2	$Pc^2 - Pw^2$
1	694.2	833.4	694.5	252.6
2	498.7	706.7	499.4	447.7
3	336.6	581.1	337.7	609.4
4	205.4	454.8	206.8	740.3
5				

(1) $\frac{Pc^2}{Pc^2 - Pw^2}$ = 2.115 (2) $\left(\frac{Pc^2}{Pc^2 - Pw^2}\right)^n$ = 1.806

ACF = Q $\left(\frac{Pc^2}{Pc^2 - Pw^2}\right)^n$ = 427

Absolute Open Flow 427 Mcfd @ 15.025 Angle of Slope θ 38 Slope n 0.789

Remarks

APR 2000
RECEIVED
OCD
ARTESIA

Approved By Commission: Conducted By: Johnny Elount Calculated By: Katie Brunson Checked By:

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 02/19/2000

COMPANY Yates Petroleum Corp LEASE Rio Penasco JX Com WELL NO. 2

LOCATION: Unit I Section 35 Township 18S Range 25E

L 9300 H 411 L / H 22.628 G 0.610 %CO_2 0.570 %N_2 0.274 %H_2S 0.000

d 2.441 Fr 0.010495 GH 250.7 Pcr 673.7 Tcr 357.6

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.150	0.237	0.299	0.343	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	605	605	605	605	
4 T = (Tw+Ts) / 2	562.2	562.2	562.2	562.2	
5 Z (Est.)	0.900	0.914	0.928	0.943	
6 TZ	505.8	513.6	521.7	530.2	
7 GH / TZ	0.496	0.488	0.481	0.473	
8 e^s(Table XIV)	1.019	1.018	1.018	1.018	
9 1-e^-s(Table XIV)	0.018	0.018	0.018	0.018	
10 Pt	833.2	706.2	580.2	453.2	
11 Pt^2 / 1000	694.2	498.7	336.6	205.4	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	5.308	5.390	5.475	5.564	
14 FcQm	0.79	1.28	1.64	1.9	
15 L / H(FcQm)²	14.3	36.8	60.7	82.3	
16 Fw = L / H(FcQm)²(1-e^-s)	0.26	0.67	1.08	1.45	
17 $Pw^2 = Pt^2+Fw$	694.5	499.4	337.7	206.8	
18 $Ps^2 = e^sPw^2$	707.5	508.6	343.9	210.5	
19 Ps	841.1	713.2	586.4	458.8	
20 P = (Pt+Ps) / 2	837.2	709.7	583.3	456.0	
21 Pr = (P / Pcr)	1.24	1.05	0.87	0.68	
22 Tr = (T / Tcr)	1.57	1.57	1.57	1.57	
23 Z (Table XI)	0.900	0.914	0.928	0.943	

Company Yates Petroleum Corp
Well Rio Penasco JX Com #2
Location I 35-18S-25E

County Eddy
Date 02-19-2000